

**TECHNICAL SUPPORT DOCUMENT**  
For  
**APACHE NITROGEN PRODUCTS, INC.**  
**Air Quality Control Permit No. 42704**

**I. INTRODUCTION**

Permit No. 42704 is a Title V renewal permit for Air Quality Permit No. 1000038 proposed to be issued to Apache Nitrogen Products, Inc. for operation of their nitric acid, liquid ammonium nitrate and ammonium nitrate prill plants located in St. David in Cochise County.

**A. Company Information**

1. Company Name: Apache Nitrogen Products
2. Mailing Address: P.O. Box 700  
Benson, AZ 85602
3. Facility Address: 1436 S. Apache Powder Road  
St. David, Cochise County, AZ 85630

**B. Learning Sites Evaluation**

There are no schools within 2 miles of the facility.

**C. Attainment Classification**

The facility is located in an attainment area for all criteria pollutants.

**II. FACILITY DESCRIPTION**

**A. Process Description**

Liquid anhydrous ammonia is received in rail tank cars and unloaded in pressurized storage vessels.

In Nitric Acid plants 3 and 4, superheated ammonia vapors react with compressed air in a catalytic converter to form hot nitrogen oxides (NO<sub>x</sub>) gas. The NO<sub>x</sub> is absorbed in water absorption towers to produce nitric acid (HNO<sub>3</sub>).

The nitric acid produced above is utilized to produce liquid ammonium nitrate (LAN). Anhydrous ammonia is vaporized in ammonia gasifier, superheated and injected into nitric acid in the neutralizer through spargers. LAN produced is stored in storage tanks, and is further utilized in production of ammonium nitrate in the Prill Plant.

In the ammonium nitrate prill plant, moisture in LAN is reduced to about 3.5% in the falling film evaporator #3. The resulting liquor LAN is sprayed in the prilling tower, and converted to ammonium nitrate prills by cooling with air. Prills are then transported to drying system by two oscillating conveyors in series. In the rotary dryer and fluidized bed dryer (FBD), the moisture in the LAN is reduced to less than 0.15%. The rotary dryer has two wet cyclones and fluidized bed dryer/cooler has 3 wet cyclones for dust collection. Product from FBD is screened in the vibrating screen to remove under-size and over-size materials from the prills. The prills from the screen are transported to coating drum, which provides talc coating to the prills to avoid agglomeration

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during transportation. The coating drum discharge, the upper housing of the bucket elevator, the inlets of upper and lower belts to storage are connected to dry particulate dust collection baghouse.

The coated product is transported to product barns numbers 1 and 2 by conveyors, and further transported to consumers by trucks.

### **B. Air Pollution Control Equipment**

The facility uses following air pollution control equipment to minimize emissions from various processes:

1. During startups of AOP-3 and AOP-4, a hydrogen peroxide system is used in absorption towers to minimize startup nitrogen oxides emissions.
2. Selective Catalytic Reduction (SCR) system is used at the AOP-3 tail gas system to control nitrogen oxide emissions before venting the tail gas to the atmosphere.
3. A high efficiency wet scrubber on the neutralizer exhaust gases is used to remove ammonia and ammonium nitrate from the neutralizer exhaust gases.
4. Two wet cyclones are installed at the prill plant rotary pre-dryer to reduce particulate matter emissions from the pre-dryer exhaust.
5. Three wet cyclones installed at the fluidized bed dryer/cooler to reduce particulate matter emissions from the dryer/cooler exhaust.
6. A baghouse is installed to capture dry particulate ammonium nitrate emissions from talc coating system.
7. A scrubber is installed on the vents of the nitric acid storage tanks for minimizing nitrogen oxides emissions from the vent.

## **III. COMPLIANCE HISTORY**

The facility was subjected to three (3) facility inspections and one hundred and eleven (111) file/report reviews between 1999-2006 and, based on these, following five (5) cases were initiated against Apache Nitrogen:

- A. Case Number 27217- A Notice of Violation was issued to Apache Nitrogen on September 15, 2003 for one permit violation based on a September 9, 2003 report review (Inspection ID: 40533). The permit violation was for non-compliance with a compliance condition. A performance test conducted on June 27, 2003, found ammonia emissions in excess of permitted level. The compliance condition for this violation stated that the facility was required to provide ADEQ with the reasons the performance test failed for ammonia and to provide the steps that will be taken to correct the problem and demonstrate compliance with the standard. The facility achieved compliance on June 23, 2004.
- B. Case Numbers 28038 and 28039- A Notice of Violation was issued to Apache Nitrogen on December 6, 2004 for six permit violations based on two report reviews conducted on September 18, 2003 and November 4, 2003 (Inspection ID: 40724 and 42284). The six permit violations were for non-compliance with the Condition for compliance certification. The factual description

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of the violation indicates that the compliance certification submitted for the period of September 16, 2002 through March 15, 2003 failed to include numerous conditions, which were required to be addressed, in the compliance certifications. The facility achieved compliance on January 10, 2005.

- C. Case Number 32797-A Notice of Violation was issued to Apache Nitrogen on October 21, 2004 for one permit violation based on a facility inspection conducted on August 4, 2004 (Inspection ID: 52381). The permit violation was for non-compliance with the Condition for operation of Tail Gas continuous opacity monitoring system (COMS) on AOP-3 and AOP-4 to monitor and record opacity of the exhaust gases. The factual description of the violation indicates that the Continuous Opacity Monitoring System (COMS) was not operational at the time of this inspection. The COMS was required to be installed and certified within 180 days (December 7, 2002) from the effective date of the permit issuance (June 7, 2002) to monitor and record opacity of the exhaust gases on AOP-3 and AOP-4 nitric acid plants. The facility achieved compliance on December 23, 2004.
- D. Case Number 36351-A Notice of Correction was issued to Apache Nitrogen on September 13, 2005 for three permit violations based on a September 7, 2005 facility inspection (Inspection ID: 66184). These violations related to monitoring requirements for COMS. The facility achieved compliance on October 12, 2005.

## IV. EMISSIONS

Facility-wide emissions (after controls) are summarized in the following table.

Pollutant	Nitric Acid plants	Boilers	Cooling Towers	LAN Plant	Prill Plant	IC Engines	Brine Conc. Plant	Nitric Acid Tank	Total
	tpy	tpy	tpy	tpy	tpy	tpy	tpy	tpy	tpy
CO		53.23				18.76			71.99
NO <sub>x</sub>	145.74	63.28				157.19		0.22	366.43
SO <sub>2</sub>		0.38				3.16			3.54
PM			66.41	0.46	160.92	3.64			231.43
PM <sub>10</sub>		4.82	66.41	0.46	140.49	3.37			215.55
VOC		3.49				6.96			10.44
NH <sub>3</sub>				0.10	3.22		4.04		7.37
HNO <sub>3</sub>				3.86					3.86

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The following table summarizes the ADEQ findings with respect to applicable requirements to emission units:

<b>Unit ID</b>	<b>Control Equipment</b>	<b>Applicable Regulations</b>	<b>Verification</b>
AOP-3	NO <sub>x</sub> fume abator	40 CFR 60 Subpart G, Installation Permit No. 1229	The trigger date for 40 CFR 60 Subpart G is August 17, 1971. The AOP-3 nitric acid plant was modified in 1993.
AOP-4	N/A	40 CFR 60 Subpart G	The trigger date for 40 CFR 60 Subpart G is August 17, 1971. The AOP-4 nitric acid plant was installed in 1975.
LAN - Neutralizer	Wet scrubber	A.A.C. R18-2-730, Conditions in Installation Permit No. 25017 40 CFR 64 (Compliance Assurance Monitoring - CAM)	The Installation Permit No. 25017 was issued on April 19, 1991. The plant is an unclassified source subject to A.A.C. R18-2-730. The plant is also required to implement an ammonia emissions reduction plan in accordance with Condition XII.B of the installation permit, in addition to operating a scrubber. 40 CFR 64 (CAM) requirements are applicable to neutralizer.
Prill Plant	Wet cyclones and baghouse	A.A.C. R18-2-702 A.A.C. R18-2-730 40 CFR 64 (Compliance Assurance Monitoring - CAM)	The plant is an unclassified source subject to A.A.C. R18-2-730. CFR 64 (CAM) requirements are applicable to rotary dryer and pre-dryer/cooler.
Steam Boilers, Super heater	N/A	A.A.C. R18-2-724	The fossil-fuel fired industrial equipment is subject to A.A.C. R18-2-724.
Internal combustion engines	N/A	A.A.C. R18-2-719	The affected equipment is subject to A.A.C. R18-2-719, existing stationary rotating machinery standards.
Gasoline Storage Tank	Submerged filling device	A.A.C. R18-2-710	A.A.C. R18-2-710 is applicable to storage tanks handling petroleum liquids, and, hence, applicable to gasoline storage tank.
Misc. Storage tanks and Cooling Towers	N/A	A.A.C. R18-2-730	These unclassified sources are subject to A.A.C. R18-2-730.
Fugitive dust sources	Water and other reasonable precautions	A.A.C. R18-2 Article 6, A.A.C. R18-2-702	The referenced rules are applicable to fugitive dust sources at the facility.

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Unit ID	Control Equipment	Applicable Regulations	Verification
Mobile sources	N/A	A.A.C. R18-2 Article 8	This Article is applicable to off-road mobile sources, which either move while emitting air pollutants or are frequently moved during the course of their utilization.
Other periodic activities	N/A	A.A.C. R18-2-727 A.A.C. R18-2-730 A.A.C. R18-2-1101.A.8	This section deals with activities such as sandblasting, spray painting, demolition/renovation asbestos control, and gaseous or odorous materials handling.
Anhydrous ammonia unloading and storage	N/A	40 CFR 68.215(a)(1) 40 CFR 68.215(a)(2)(ii) 40 CFR 68.215(b)	This section deals with the ammonia accidental release requirements from 40 CFR 68.

**VI. PREVIOUS PERMIT CONDITIONS**

Table below compares the conditions in Permit No. 1000038 with the conditions in this permit and cross-references the previous permit conditions to their location in the new permit.

Condition # in permit nos. 1000038	Determination				Comments
	Delete	Kept	Revise	Streamline	
Attachment A			x		This Attachment has been revised and most recent Attachment "A" is used for this permit.
Attachment B					
Condition II.A.1		x			The applicability requirement for AOP-3 and AOP-4 has been retained as II.A.
Condition II.A.2	x				This condition describing the definitions has been deleted.
Condition II.A.3	x				This general testing requirement has been deleted as NO <sub>x</sub> testing requirement are covered under respective sub-sections.
Condition II.A.4 and 5	x				These Method 9 opacity testing requirement are deleted as the facility is equipped with COMS meeting the requirements of A.A.C. R-18-2 Appendix 9.
Condition II.A.6		x			The general air pollution control requirement has been relocated as Condition II.B.5 in the revised permit.
Condition II.A.7		x			The general compliance certification submittal requirement has been relocated as Condition II.B.6 in the revised permit.

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Condition # in Permit No. 1000038	Determination				Comments
	Delete	Kept	Revise	Streamline	
Condition II.B.1		x			This opacity standard for nitric acid plants is relocated as II.C.1 in the revised permit.
Condition II.B.2		x			The NSPS emission standard for NO <sub>x</sub> is relocated as Condition II.D.1.a in the revised permit.
Condition II.C		x			The air pollution control requirements for AOP-3 and AOP-4 have been relocated under Condition II.D.2 in the revised permit.
Condition II.D.1		x			The opacity monitoring requirements (COMS) for nitric acid plants have been relocated as Condition II.C.2 in the revised permit.
Condition II.D.2.a		x			The NO <sub>x</sub> CEMS requirement has been relocated as Condition II.D.3.a.(1) in the revised permit.
Condition II.D.2.b		x			The record keeping requirement for nitric acid production is relocated as II.D.3.d in the revised permit.
Condition II.D.2.c		x			The NO <sub>x</sub> CEMS quality control requirements have been relocated under Condition II.D.3.a.(2) in the revised permit.
Condition II.D.2.d(1)			x		The NO <sub>x</sub> CEMS quality assurance requirement for AOP-3 has been revised to include AOP-4 also, and is relocated under Condition II.D.3.c in the revised permit.
Condition II.D.2.d(2)	x				The NO <sub>x</sub> CEMS performance evaluation requirement for AOP-4 has been deleted as this is covered under Condition II.D.3.c in the revised permit.
Condition II.D.3.a and b		x			The NSPS record keeping and reporting requirements have been relocated as Conditions II.B.2 and II.B.4 in the revised permit.
Condition II.D.3.c(1) and (2)		x			The reporting requirements for excess emission and monitoring system performance have been relocated under Condition II.B.3 in the revised permit.
Condition II.D.3.c(3)(a)		x			The Condition defining excess emission for opacity is relocated as Condition II.C.2.c in the revised permit.
Condition II.D.3.c(3)(b)		x			The Condition defining period of excess emission for NO <sub>x</sub> is relocated as Condition II.D.3.e.(1) in the revised permit.
Condition II.E	x				Performance testing requirements for NO <sub>x</sub> are not necessary, as these are adequately covered under CEMS for both plants.

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Condition # in Permit No. 1000038	Determination				Comments
	Delete	Kept	Revise	Streamline	
Section III.A	x				This Part described the applicability and definitions for AOP-3. Requirements for AOP-3 are now included in Section II in the revised permit.
Condition III.B.2.a(1)		x			The NO <sub>x</sub> CEMS requirement for AOP-3 has been relocated as Condition II.D.3.a.(1) in the revised permit.
Condition III.B.2.a(2)		x			The requirement for flow rate measurement for AOP-3 exhaust gases is relocated as Condition II.D.3.b in the revised permit.
Conditions III.B.2.b and c		x			The QA requirements for AOP-3 NO <sub>x</sub> CEMS are covered under Condition II.D.3.c in the revised permit.
Condition III.B.2.d		x			The Condition for NO <sub>x</sub> monitor RATA testing requirements is covered under Condition II.D.3.c in the revised permit.
Condition III.B.2.e		x			The record-keeping requirement for NO <sub>x</sub> monitors and flow meter is covered under Condition II.B.4 in the revised permit.
Condition III.C.1		x			The NH <sub>3</sub> emission limitation and standards for AOP-3 are relocated as Condition II.E.1 in the revised permit.
Condition III.C.2		x			The performance test requirements for NH <sub>3</sub> emissions from AOP-3 have been relocated under Condition II.E.2 in the revised permit.
Condition IV.A		x			The applicability requirement for liquid ammonium nitrate plant is relocated as Condition III.A in the revised permit.
Condition IV.B.1			x		The particulate matter emission limitation and standards for liquid ammonium nitrate plant is relocated as Condition III.B.1. The opacity limit has been reduced to 20% as per current requirements under A.A.C. R18-2-702.B in the revised permit.
Condition IV.B.2		x			The particulate matter air pollution control requirements for liquid ammonium nitrate plant have been relocated under Condition III.B.2 in the revised permit.
Condition IV.B.3.a	x				The opacity monitoring requirements for liquid ammonium nitrate plant have been deleted as CAM requirements are adequate for control of particulate matter emissions.

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Condition # in Permit No. 1000038	Determination				Comments
	Delete	Kept	Revise	Streamline	
Condition IV.B.3.b			x		The particulate matter monitoring requirements have been revised to include CAM requirements and are relocated under Condition III.B.3 in the revised permit.
Condition IV.B.4		x			The particulate matter and opacity testing requirements for liquid ammonium nitrate plant have been relocated under Condition III.B.4 in the revised permit.
Condition IV.C.1		x			The NH <sub>3</sub> emission limitation and standards for liquid ammonium nitrate plant is relocated as Condition III.C.1 in the revised permit.
Condition IV.C.2		x			The air pollution control requirement for NH <sub>3</sub> emissions from liquid ammonium nitrate plant has been relocated as Condition III.C.2 in the revised permit.
Condition IV.C.3		x			The testing requirements for NH <sub>3</sub> emissions from liquid ammonium nitrate plant have been relocated under Condition III.C.3 in the revised permit.
Condition V.A		x			The applicability requirement for ammonium nitrate prill plant is relocated as Condition IV.A in the revised permit.
Condition V.B			x		The particulate matter emission limitation and standards for ammonium nitrate prill plant is relocated as Condition IV.B.1. The opacity limit has been reduced to 20% as per current requirements under A.A.C. R18-2-702.B.
Condition V.C		x			The particulate matter air pollution control requirements for ammonium nitrate prill plant have been relocated under Condition IV.B.2 in the revised permit.
Condition V.D.1.			x		The wet particulate matter monitoring requirements for ammonium nitrate prill plant have been revised to include CAM requirements and are relocated under Condition IV.B.3.b in the revised permit.
Condition V.D.2.		x			The opacity monitoring requirements for ammonium nitrate prill plant have been relocated under Condition IV.B.3.a.
Condition V.E		x			The particulate matter testing requirements for ammonium nitrate prill plant have been relocated under Condition IV.B.4 in the revised permit.
Condition VI.A		x			The applicability requirement for fossil fuel fired equipment is relocated as Condition V.A in the revised permit.



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Condition # in Permit No. 1000038	Determination				Comments
	Delete	Kept	Revise	Streamline	
Condition VI.B.1 and 2		x			The Condition for particulate matter emission limitation and standards for fossil fuel fired equipment is relocated under Condition V.C.1 in the revised permit.
Condition VI.B.3		x			The condition of fuel limitation for fossil fuel fired equipment is relocated as Condition V.B in the revised permit.
Condition VI.C.1 and 2.		x			The opacity and particulate matter monitoring, record keeping and reporting requirements for fossil fuel fired equipment have been relocated under Condition V.C.2 in the revised permit.
Condition VI.C.3	x				This condition for maintenance requirements is deleted as this is covered under facility-wide requirement for all equipment under Condition I.A.2 in the revised permit.
Condition VII.A			x		The applicability requirement for stationary rotating machinery has been revised to include diesel-fired compressor and is relocated as Condition VI.A in the revised permit.
Condition VII.B.1 and 2		x			The condition for particulate matter emission limitation and standards for stationary rotating machinery is relocated under Condition VI.D.1.
Condition VII.B.3			x		The condition of fuel limitation for stationary rotating machinery is revised to include requirement for diesel engine and is relocated as Condition VI.C in the revised permit.
Condition VII.C.1 and 2.		x			The opacity and particulate matter monitoring, record keeping and reporting requirements for stationary rotating machinery have been relocated under Condition VI.D.2 in the revised permit.
Section VIII		x			The section for gasoline storage tank has been renumbered as Section VII in the revised permit.
Condition IX.A		x			The nitric acid tanks are covered under Condition VIII.A in the revised permit.
Condition IX.B			x		The condition for opacity limitation for nitric acid tank is covered under Condition VIII.B.1.c in the revised permit. The opacity limit has been reduced to 20% as per current requirements under A.A.C. R18-2-702.B.
Condition IX.C		x			The air pollution control requirement for nitric acid tanks has been relocated as Condition VIII.C in the revised permit.

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Condition # in Permit No. 1000038	Determination				Comments
	Delete	Kept	Revise	Streamline	
Condition IX.D		x			The opacity and particulate matter monitoring, record keeping and reporting requirements for nitric acid tanks have been relocated under Condition VIII.B.2 in the revised permit.
Condition X.A		x			The cooling towers are covered under Condition VIII.A in the revised permit.
Condition X.B			x		The requirements for opacity and particulate matter emission limitation for cooling towers are covered under Condition VIII.B.1 in the revised permit. The opacity limit has been reduced to 20% as per current requirements under A.A.C. R18-2-702.B.
Condition X.C			x		The opacity and particulate matter monitoring, record keeping and reporting requirements for cooling towers have been relocated under Condition VIII.B.2. The requirement for base line opacity establishment has been deleted.
Section XI			x		The section for non-point source requirements has been renamed as "Fugitive Dust Requirements" and has been relocated as Section IX in the revised permit. The requirements for open-burn have been deleted as this activity is not performed at the facility.
Section XII		x			The section for mobile source requirements has been renumbered as Section X in the revised permit.
Section XIII		x			The section for other periodic requirements has been renumbered as Section XI in the revised permit.

## VII. MONITORING AND RECORD KEEPING REQUIREMENTS

The following is discussion of the periodic monitoring measures the permit requires ANPI to implement under the periodic monitoring rule A.A.C. R18-2-306.A.3.c. Some process equipment (liquid ammonium neutralizer, prill plant pre-dryer and prill plant rotary dryer) is subject to the Compliance Assurance Monitoring (CAM) requirements described in VIII.B below.

### A. Nitric Acid Plants (AOP-3 and AOP-4)

#### 1. Opacity

The Nitric Acid Plants, AOP-3 and AOP-4, are subject to 10% opacity standard set forth in 40 CFR 60.72(a)(2). The Permittee is required to install, maintain and operate continuous opacity monitoring systems (COMS) on the AOP-3 and AOP-4 exhaust stacks to perform opacity periodic monitoring. The monitoring systems are required to

meet the requirements of 40 CFR 60, Appendix B, Performance Specification 1.

2. NO<sub>x</sub>

The tail gas exhausts from AOP-3 and AOP-4 are subject to the NO<sub>x</sub> emission standard of 3.0 lb per ton of acid produced specified in 40 CFR 60.72(a)(1). The Permittee is required to maintain and operate a NO<sub>x</sub> Continuous Emission Monitoring system (CEMS) at each acid plant tail gas exhaust to monitor and record NO<sub>x</sub> emissions discharged into the atmosphere. NO<sub>x</sub> CEMS are required, at a minimum, to meet the requirements of 40 CFR 60.13 and 40 CFR 60, Appendix B Performance Specification 2

AOP-3 tail gas is also subject to the NO<sub>x</sub> emissions limits of 8.60 lb per hour set forth in Installation Permit 1229. These limits were set for the purpose of NO<sub>x</sub> emission PSD netting out. The Permittee is required to maintain and operate Continuous Emission Rate Monitoring System (CERMS) to determine compliance with the NO<sub>x</sub> emission rate limits. The CERMS is required to meet the requirements of 40 CFR 60, Appendix B Performance Specification 6. To assure the measurement quality of the compliance monitor, the NO<sub>x</sub> CEMS is required to meet the requirements of 40 CFR 60, Appendix F.

3. Ammonia

AOP-3 is subject to ammonia discharge limits of 3.0 lb per hour, set forth in Installation Permit 1229. The Permittee is required to conduct performance testing annually for the AOP-3 ammonia emissions.

**B. Prill Plant Equipment**

The Permittee is required to make a bi-weekly visible emission survey of equipment in prill plant against its baseline value. If the opacity of the emissions observed appears to exceed the baseline value, the observer must conduct a certified EPA Reference Method 9 observation. If visibility or other conditions prevent the observation, the observer shall document these conditions. If the observation indicates opacity in excess of the baseline value, then the Permittee is required to initiate corrective action as necessary to reduce opacity to below the baseline level and record the source of emission, date, time, and result of the observation, and the name of the observer. If this observation indicates opacity in excess of the 20% standard then the Permittee is also required to report it as excess emissions.

**C. Natural Gas-fired Process Steam Boilers and Super heater**

The Permittee is required to make a bi-weekly survey of the visible emissions from the stacks of all boilers and super heater. If the opacity of the emissions observed appears to exceed 15%, the observer must conduct a certified EPA Reference Method 9 observation. If this observation indicates opacity in excess of 15% then the Permittee is required to report it as excess emissions, and initiate corrective action as necessary to bring the opacity to below 15%. The Permittee is required to record the source of emission, date, time, and result of the observation, the name of the observer and corrective action taken.

**D. Internal Combustion Engines**

1. The Permittee is required to make a bi-weekly survey of the visible emissions from the stacks of internal combustion engines, when in operation. If the opacity of the emissions observed appears to exceed 40%, the observer must conduct a certified EPA Reference Method 9 observation. If this observation indicates opacity in excess of 40% then the

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Permittee is required to report it as excess emissions, and initiate corrective action as necessary to bring the opacity to below 40%. The Permittee is required to record the source of emission, date, time, and result of the observation, the name of the observer and corrective action taken.

2. Hours of operation for the 830-hp generator

The Permittee is required to keep records of monthly and rolling 12-month total of the hours of operation for the 830-hp generator.

### E. Other Miscellaneous Point Sources

The Permittee is required to make a bi-weekly survey of the visible emissions from all miscellaneous sources (storage tanks, cooling towers, fertilizer plant and brine concentrator plant). If the opacity of the emissions observed appears to exceed 20%, the observer must conduct a certified EPA Reference Method 9 observation. If this observation indicates opacity in excess of 20% then the Permittee is required to report it as excess emissions, and initiate corrective action as necessary to bring the opacity to below 20%. The Permittee is required to record the source of emission, date, time, and result of the observation, the name of the observer and corrective action taken.

## VIII. COMPLIANCE ASSURANCE MONITORING (CAM) (40 CFR 64)

### A. Liquid Ammonium Nitrate Plant

	Indicator 1	Indicator 2	Indicator 3
Indicator and its measurement approach	Gas stream pressure drop	Scrubber liquid flow rate	PH of scrubber liquid
Indicator Range	The indicator range will be the value established during annual performance testing +/- 30%.	The indicator range will be the value established during annual performance testing +/-30%.	The indicator range for scrubber liquid pH will be 3.5 +/-0.50.
QA/QC practices and criteria	Operate and maintain pressure indicators as per manufacturer's specifications.	Operate and maintain flow indicators as per manufacturer's specifications.	Operate and maintain pH indicator as per manufacturer's specifications.
Monitoring Frequency	The pressure drop monitors will be in continuous operation and shall be recorded once every day.	The scrubber flow rate monitors will be in continuous operation and shall be recorded once every day.	The pH monitor shall be in continuous operation and pH will be recorded once every day.
Data Collection Procedure	Recorded by operators on log sheets.	Recorded by operators on log sheets.	Recorded by operators on log sheets.

**DRAFT****B. Ammonium Nitrate Prill Plant Pre-Dryer and Rotary Dryer**

	<b>Indicator 1</b>	<b>Indicator 2</b>
Indicator and its measurement approach	Gas stream pressure drop	Liquid flow rate to cyclones
Indicator Range	The indicator range will be the value established during annual performance testing +/- 30%.	The indicator range will be the value established during annual performance testing +/- 30%.
QA/QC practices and criteria	Operate and maintain pressure indicators as per manufacturer's specifications.	Operate and maintain flow indicators as per manufacturer's specifications.
Monitoring Frequency	The pressure drop monitors will be in continuous operation and shall be recorded once every day.	The liquid flow rate monitors will be in continuous operation and shall be recorded once every day.
Data Collection Procedure	Recorded by operators on log sheets.	Recorded by operators on log sheets.

**IX. INSIGNIFICANT ACTIVITIES**

The applicant has requested the following activities to be deemed as "insignificant". According to A.A.C. R18-2-101.57, for an activity to be deemed "insignificant", there should be no applicable requirement for the activity. This was the basis used to determine if the activities in the following list qualify as an "insignificant" activity under Arizona law.

<b>Activity</b>	<b>Insignificant Yes/No</b>	<b>Reason and Applicable Regulation</b>
Fugitive emissions from roadways located onsite.	No	A.A.C. R18-2, Article 6
Storage tanks	No	Gasoline storage tank is subject to A.A.C. R18-2-710. Nitric acid, ammonia and LAN storage tanks are subject to A.A.C. R18-2-730.
Ammonia unloading from rail cars	No	A.A.C. R18-2-730
Fugitive emissions of ammonia from AOP-3, AOP-4, LAN and prilled ammonium nitrate plants	No	A.A.C. R18-2-730
Laboratories used for chemical and physical analysis	Yes	A.A.C. R18-2-101.57(i)
Emissions from burning of weed	No	A.A.C. R18-2, Article 6. Open burn permit will be required.
Emissions from Safety Kleen solvent containers	Yes	A.A.C. R18-2-101.57(j)
Emissions from asbestos removal for renovation purposes.	No	A.A.C. R18-2-1101.A.8

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Activity	Insignificant Yes/No	Reason and Applicable Regulation
Building maintenance and janitorial activities, including painting and welding activities.	Yes	A.A.C. R18-2-101.119(e) and (l)
Equipment maintenance including painting, welding, cleaning, and application of lubricants.	Yes	A.A.C. R18-2-101.119(e) and (l)

## X. LIST OF ABBREVIATIONS

A.A.C.	Arizona Administrative Code
ADEQ	Arizona Department of Environmental Quality
AQD	Air Quality Division
Btu/ft <sup>3</sup>	British Thermal Units per Cubic Foot
CO	Carbon Monoxide
CO <sub>2</sub>	Carbon Dioxide
g	Grams
HAP	Hazardous Air Pollutant
hp	Horsepower
hr	Hour
IC	Internal Combustion
lb	Pound
m	Meter
MMBtu	Million British Thermal Units
NO <sub>x</sub>	Nitrogen Oxide
NO <sub>2</sub>	Nitrogen Dioxide
PM	Particulate Matter
PM <sub>10</sub>	Particulate Matter Nominally less than 10 Micrometers
PTE	Potential-to-Emit
SO <sub>2</sub>	Sulfur Dioxide
TPY	Tons per Year
USEPA	United States Environmental Protection Agency
VOC	Volatile Organic Compound
yr	Year